TRENDS

Health Spending Projections For 2002–2012

Spending on hospital services and prescription drugs continues to drive health care's share of the economy upward.

by Stephen Heffler, Sheila Smith, Sean Keehan, M. Kent Clemens, Greg Won, and Mark Zezza

ABSTRACT: We forecast a slowdown in national health spending growth in 2002 and 2003, reflecting slower projected Medicare and private personal health spending growth. These factors outweigh higher projected Medicaid spending growth, caused by weak labor markets, and an expectation of continued high private health insurance premium inflation related to the underwriting cycle. Over the entire projection period, national health spending growth is still expected to outpace economic growth. The result is that the health share of gross domestic product is projected to increase from 14.1 percent in 2001 to 17.7 percent in 2012.

BETWEEN 2002 AND 2012 national health spending is projected to grow at an average annual rate of 7.3 percent, reaching $3.1 trillion by 2012 (Exhibits 1 and 2). This increase would bring health spending to approximately 17.7 percent of gross domestic product (GDP) by 2012, up from its 2001 share of 14.1 percent (Exhibit 3).[1] The short-term aggregate pattern of national health spending growth is similar to our previous forecast, which showed growth peaking in 2001.[2] After increasing 8.7 percent in 2001, national health spending growth is projected to be 8.6 percent in 2002 and 7.3 percent in 2003. This slowdown would follow five consecutive years of accelerating spending growth.

The overall similarity between our current and previous short-term health spending growth projections masks changes in the composition of growth. First, economywide consumer price inflation for 2002 is projected to be 1.1 percent, well below the 2.3 percent projected last year. All other things being equal, this would result in a lower projection of health spending growth. However, we project this effect to be partly offset by faster medical price inflation above overall price inflation and more rapid growth in utilization of services.[3]

A second near-term compositional change since our last forecast is a shift toward public spending in 2002 and 2003. Stronger near-term growth in use of care is partially driven by fast growth in Medicaid enrollment, offsetting a decline in private health insurance enrollment (Exhibit 4). The changes in private health insurance and Medicaid enrollment projected for 2002 are related, reflecting higher premiums and softer labor markets. Stronger projected Medicaid enrollment growth produces a Medicaid share of total health spending of 16.7 percent in 2003, compared with 16.1 percent projected last year.

A third revision to projected patterns of growth involves the role of the private health

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EXHIBIT 1
National Health Expenditures (NHE), Aggregate And Per Capita Amounts, And Share Of Gross Domestic Product (GDP), Selected Calendar Years 1988–2012

Spending category	1988	1993	2000	2001	2002[a]	2003[a]	2008[a]	2012[a]
NHE (billions)	$558.1	$888.1	$1,310.0	$1,424.5	$1,547.6	$1,660.5	$2,354.6	$3,079.8
Health services and supplies	535.4	856.3	1,262.3	1,372.6	1,492.9	1,602.5	2,273.1	2,974.6
Personal health care	493.3	775.8	1,137.5	1,236.4	1,331.4	1,423.8	2,022.9	2,639.1
Hospital care	209.4	320.0	416.5	451.2	484.6	511.2	688.3	860.0
Professional services	176.3	280.7	425.0	462.4	494.4	529.6	758.1	999.0
Physician and clinical services	127.4	201.2	288.8	313.6	334.0	356.8	500.1	646.4
Other professional services	14.3	24.5	38.8	42.3	44.8	47.6	69.6	90.9
Dental services	27.3	38.9	60.7	65.6	70.1	74.0	97.8	118.3
Other personal health care	7.3	16.1	36.7	40.9	45.5	51.2	90.5	143.4
Nursing home and home health	48.9	87.6	125.5	132.1	139.9	146.4	195.5	247.7
Home health care[b]	8.4	21.9	31.7	33.2	36.2	38.3	53.3	68.9
Nursing home care[b]	40.5	65.7	93.8	98.9	103.7	108.2	142.1	178.8
Retail outlet sales of medical products	58.7	87.5	170.5	190.7	212.5	236.5	381.1	532.4
Prescription drugs	30.6	51.3	121.5	140.6	160.7	182.1	309.7	445.9
Durable medical equipment	8.7	12.8	17.8	18.4	19.3	20.3	27.8	34.8
Nondurable medical products	19.4	23.4	31.2	31.8	32.6	34.1	43.5	51.7
Government administration and net cost of private health insurance	26.6	53.3	80.7	89.7	110.9	123.9	167.4	222.6
Government public health activities	15.5	27.2	44.1	46.4	50.6	54.8	82.7	112.9
Investment	22.7	31.8	47.7	52.0	54.8	58.0	81.5	105.2
Research[c]	10.8	15.6	29.1	32.8	34.7	36.8	53.4	70.9
Construction	11.9	16.2	18.6	19.2	20.1	21.2	28.1	34.2
NHE per capita	$2,243	$3,381	$4,675	$5,039	$5,427	$5,775	$7,865	$9,972
Population (millions)	249	263	280	283	285	288	299	309
GDP, billions of dollars	$5,108	$6,642	$9,825	$10,082	$10,425	$10,925	$14,320	$17,389
Real NHE[d]	$695.9	$944.3	$1,225.4	$1,302.1	$1,399.3	$1,474.8	$1,846.5	$2,164.8
Chain-weighted GDP index	80.2	94.0	106.9	109.4	110.6	112.6	127.5	142.3
Personal health care deflator[e]	67.7	90.2	110.9	115.0	118.8	122.8	146.0	169.4
NHE as percent of GDP	10.9%	13.4%	13.3%	14.1%	14.8%	15.2%	16.4%	17.7%

SOURCES: Centers for Medicare and Medicaid Services, Office of the Actuary; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

NOTES: Numbers may not add to totals because of rounding. 1988 marks the peak period of growth in NHE, and 1993 marks the beginning of the shift to managed care.

[a] Projected.

[b] Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care.

[c] Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures" but are included in the expenditure class in which the product falls.

[d] Deflated using GDP chain-type price index (1996 = 100.0).

[e] Personal health care (PHC) chain-type index is constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each of the remaining PHC components (1996 = 100.0).

insurance underwriting cycle.[4] The differential between private insurance premiums and medical benefits (net cost of insurance) per enrollee is an indicator of this cycle and is a key determinant of health insurers' profitability.[5] Consistent with recent data, which indicate a sharp increase in this differential, we project that the net cost of insurance will rise from 11.9 percent in 2001 to 14.0 percent in 2002.[6] Thus, while per enrollee cost growth is expected to decelerate from 10.8 percent in 2001 to 8.9 percent in 2002, per enrollee pre-

EXHIBIT 2
National Health Expenditures (NHE), Average Annual Growth, Selected Calendar Years

Spending category	1966–1988	1989–1993	1994–2000	2001	2002[a]	2003[a]	2004–2008[a]	2009–2012[a]
NHE	12.0%	9.7%	5.7%	8.7%	8.6%	7.3%	7.2%	6.9%
Health services and supplies	12.3	9.8	5.7	8.7	8.8	7.3	7.2	7.0
Personal health care	12.2	9.5	5.6	8.7	7.7	6.9	7.3	6.9
Hospital care	12.5	8.8	3.8	8.3	7.4	5.5	6.1	5.7
Professional services	12.2	9.8	6.1	8.8	6.9	7.1	7.4	7.1
Physician and clinical services	12.6	9.6	5.3	8.6	6.5	6.8	7.0	6.6
Other professional services	15.4	11.4	6.8	9.1	5.8	6.3	7.9	6.9
Dental services	10.4	7.3	6.6	8.0	6.9	5.7	5.7	4.9
Other personal health care	10.2	17.2	12.4	11.5	11.4	12.4	12.1	12.2
Nursing home and home health	16.2	12.4	5.3	5.2	5.9	4.7	5.9	6.1
Home health care[b]	21.8	21.0	5.5	4.5	9.1	5.8	6.9	6.6
Nursing home care[b]	15.5	10.2	5.2	5.5	4.8	4.3	5.6	5.9
Retail outlet sales of medical products	9.7	8.3	10.0	11.8	11.4	11.3	10.0	8.7
Prescription drugs	9.6	10.8	13.1	15.7	14.3	13.4	11.2	9.5
Durable medical equipment	9.8	8.0	4.8	3.5	5.0	5.3	6.4	5.8
Nondurable medical products	9.9	3.9	4.2	1.8	2.6	4.6	5.0	4.4
Government administration and net cost of private health insurance	11.9	15.0	6.1	11.2	23.6	11.7	6.2	7.4
Government public health activities	15.0	11.9	7.1	5.3	9.1	8.3	8.6	8.1
Investment	8.3	7.0	6.0	9.0	5.4	5.9	7.1	6.6
Research[c]	8.9	7.6	9.3	12.7	5.7	6.0	7.7	7.4
Construction	7.8	6.4	2.0	3.2	4.7	5.6	5.8	5.0
NHE per capita	11.0	8.6	4.7	7.8	7.7	6.4	6.4	6.1
Population	1.0	1.1	0.9	0.9	0.9	0.8	0.8	0.8
GDP	8.9	5.4	5.8	2.6	3.4	4.8	5.6	5.0
Real NHE[d]	6.3	6.3	3.8	6.3	7.5	5.4	4.6	4.1
Chain-weighted GDP index	5.4	3.2	1.8	2.3	1.1	1.8	2.5	2.8
Personal health care deflator[e]	7.3	5.9	3.0	3.7	3.2	3.4	3.5	3.8

SOURCES: Centers for Medicare and Medicaid Services, Office of the Actuary; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

NOTES: Numbers may not add to totals because of rounding. 1988 marks the peak period of growth in NHE, and 1993 marks the beginning of the shift to managed care.

[a] Projected.

[b] Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care.

[c] Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures" but are included in the expenditure class in which the product falls.

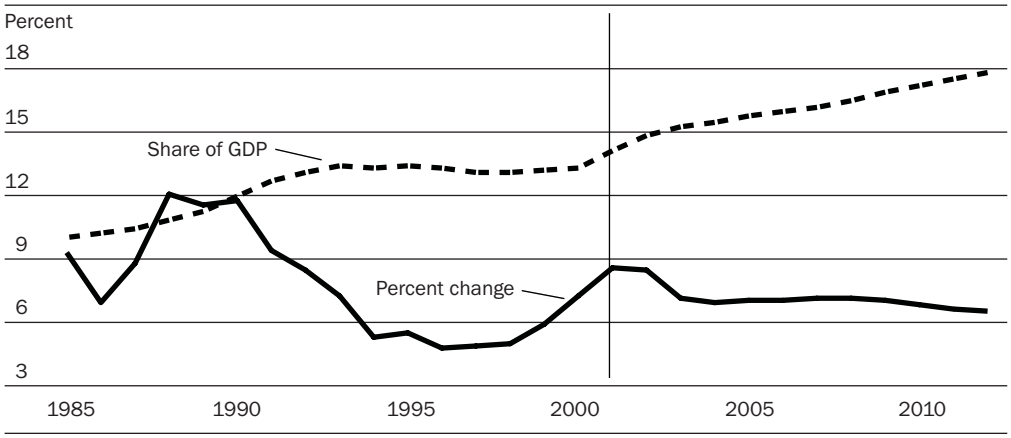
[d] Deflated using GDP chain-type price index (1996 = 100.0).

[e] Personal health care (PHC) chain-type index is constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each of the remaining PHC components (1996 = 100.0).

mium growth is projected to accelerate from 11.1 percent to 11.6 percent (Exhibit 5).

For 2004 and beyond, the pattern of national health spending growth has been slightly altered, primarily reflecting a higher forecast for real GDP and disposable income growth.[7] Last year we projected slightly higher national health spending growth in 2004 followed by a period of nearly continuous deceleration. This year our forecast shows an extended period of modest acceleration in growth until 2007, and then a more gradual

EXHIBIT 3
National Health Expenditures: Percentage Change And Share Of Gross Domestic Product (GDP), 1985–2012

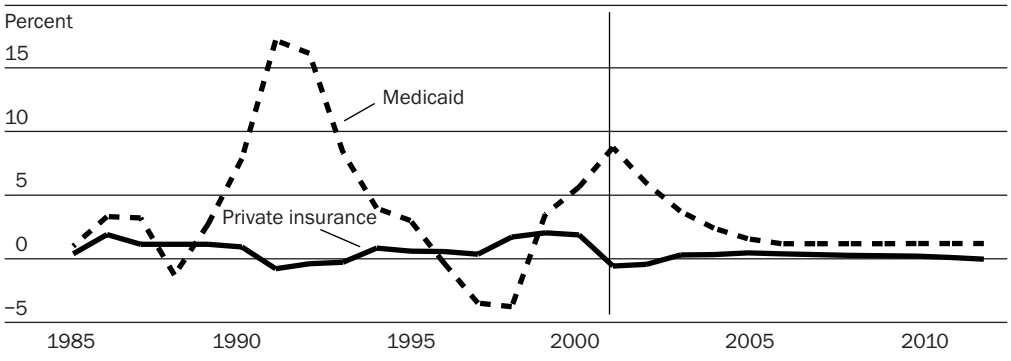


SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTE: Vertical line denotes beginning of projections; trend lines to the left of the vertical line represent historical data.

slowing to a 2011 growth rate that is similar to last year's forecast (6.8 percent this year versus 6.7 percent last year).[8] This pattern of growth, together with revised historical GDP data, results in a projected national health spending share of GDP that is only slightly higher than we forecasted last year.[9] We now expect national health spending to equal about 17.4 percent of GDP in 2011, compared with last year's forecast of 17.0 percent.

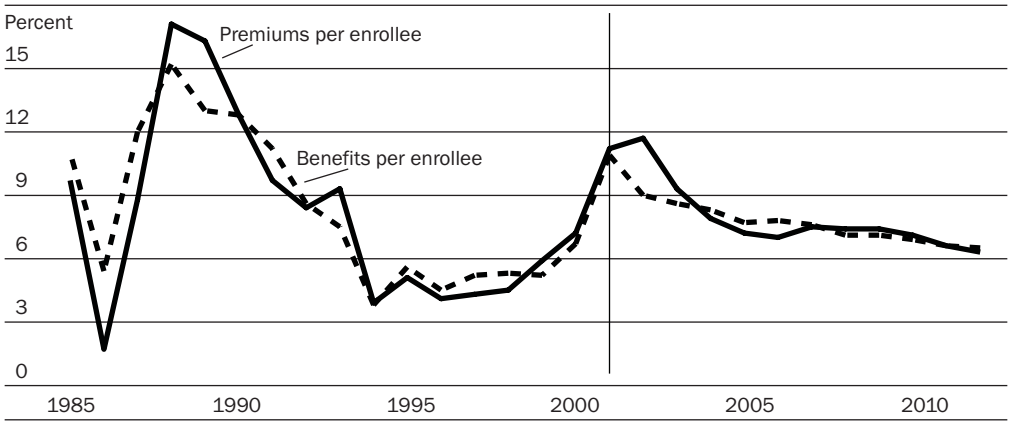
The national health spending projections are generated within a framework that incorporates actuarial, econometric, and judgmental inputs. "Current law" projections for Medicare are based on the 2002 Medicare Trustees Report; Medicaid spending projections are consistent with Trustees Report assumptions.[10] Projections for private health spending are based on an econometric model.[11] Both the private and public projections use the economic and demographic assumptions from the 2002 Medicare Trustees Report, updated to reflect the latest historical data.[12] Our projections are conditional on assumptions about macroeconomic conditions and health sector parameters, with the degree of uncertainty in-

EXHIBIT 4
Percentage Change In Private Health Insurance And Medicaid Enrollment, 1985–2012



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTE: Vertical line denotes beginning of projections; trend lines to the left of the vertical line represent historical data.

EXHIBIT 5
Growth In Per Enrollee Private Health Insurance Premiums And Benefits, 1985–2012



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTE: Vertical line denotes beginning of projections; trend lines to the left of the vertical line represent historical data.

creasing with the projection horizon. We qualify our projections, then, subject to these inherent uncertainties and how they might affect our results.

The Funding Outlook

■ **Private-sector spending.** Last year we expected that private personal health care spending growth would peak in 2002, but the latest outlook indicates that the peak actually occurred in 2001. After increasing 7.9 percent in 2001, private personal health care spending growth is now projected to fall to 7.4 percent in 2002 and eventually decline to 6.1 percent in 2012. We ascribe much of the long-term deceleration to slowing real per capita income growth, an increase in the uninsured population, and increased consumer cost sharing.

In the near term the forecast revision reflects three major factors. First, the Commerce Department's Bureau of Economic Analysis (BEA) released downward revisions to historical disposable personal income. Since changes in income have a lagged effect in our models, the BEA revisions result in lower projected near-term health spending growth. Second, the Labor Department's Bureau of Labor Statistics (BLS) health-sector payroll data for the first ten months of 2002 show a deceleration in growth relative to 2001, suggesting, all other things held constant, a slowing in health expenditure growth.[13] Third, published BLS data for 2002 indicate slower medical price growth than was projected last year.[14]

An important influence on our private health spending projections is overall economic growth as measured by a moving average of growth in real per capita disposable personal income. This variable has been included in our model since the inception of the current projections methodology in 1998. The lagged income effect on health spending is a function of the role of third-party payers, which largely insulate health expenditures from simultaneous changes in household income. Since consumers generally do not pay for most of their medical expenses directly, their purchasing decisions are not immediately affected by short-term variations in income. Thus, the effects of income not only reflect the direct impact of consumers' choice of medical care but also are intended to indirectly capture a large range of structural changes in the financing and delivery of care, which occur in response to changes in economic growth.

One example of such an effect was the introduction and spread of managed care in the mid-1990s, which was partly a lagged response to rapid increases in health spending relative to income in the early part of that decade. Similarly, the recent greater willingness to pay for medical care—evidenced by a shift toward less

restrictive forms of coverage, the passage of a range of patient protection laws at the state and federal levels, and the passage of legislation more generous to providers—can be seen as a response to rising real income growth in the mid- to late 1990s.

In response to the recent economic slowdown, employers have raised employee cost-sharing requirements, both as a condition of coverage and at the point of service.[15] Also, prescription drug plans are making greater use of tiered copayments as a tool to manage demand. Other responses include the introduction of new disease management programs for the chronically ill, retrenchment in coverage of retirees and part-time employees, legislation to curb malpractice awards, and the introduction of defined-contribution employer health plans.[16] Although future structural changes are difficult to predict, our projections suggest that over time consumers and employers will act through a range of channels to restrain costs as income growth slows.

■ **Private health insurance enrollment.** Enrollment growth peaked in 2000 as a result of stiff competition for workers and because of employers' reluctance to pass premium increases on to employees. Last year we projected a deceleration in private health insurance enrollment growth in 2001 because of the recession (although forecasted enrollment growth was still positive), followed by a slight acceleration in anticipation of a modest economic recovery. In fact, enrollment actually declined sharply in 2001, largely because of weaker-than-expected employment growth and, to a lesser degree, double-digit premium increases.[17]

The projected trend in private health insurance enrollment reflects cyclical and long-term factors. In the near term we expect that enrollment will continue to decline in 2002, reflecting the weak economy and continued premium inflation. As in 2001, changes in employment patterns by sector in 2002 (through November) suggest a decline in the privately insured population.

We expect enrollment growth to turn positive in 2003 and peak in 2005, as economic growth accelerates and the underwriting cycle enters a downward phase. However, we expect private enrollment as a fraction of the total population to fall throughout the projection period, as health care costs grow faster than incomes, as the composition of employment shifts to industries that tend to have less coverage, and as the Medicare-eligible share of the population rises.[18]

■ **The underwriting cycle.** Historically, the net cost of insurance as a share of total private health insurance follows a cyclical path. Price competition during a "soft market" leads to shrinking margins and, concomitantly, company insolvencies. This, in turn, results in a "hard market" characterized by reduced competitive pressures, rising premiums, and more stable profits.[19] Hard markets have been typically short-lived, with the net cost ratio falling sharply after a peak. The data also show that the amplitude of the cycles dampened in the 1990s, relative to 1970–1990, coincident with the shift in enrollment to managed care plans.

Our forecast suggests two changes to the recent historical pattern. First, we project a rise in 2002 for the net cost of insurance as a share of premiums to 14 percent, which is higher than any period in the 1990s but lower than the hard markets observed in the pre–managed care period. Our projection for 2002 shows a slowing in the rate of benefit growth, lower projected private health insurance enrollment, increasing profits for many of the larger health insurers, and accelerating premium growth.[20]

Second, we expect this hard market to exhibit a more gradual softening than has historically been the case. More generally, we anticipate a much weaker underwriting cycle in the future, reflecting anecdotal evidence of reduced competition (with fewer small insurers present, as a result of industry consolidation) and more savvy management that is less likely to overreact to cyclical swings (especially during hard markets).

We expect that out-of-pocket spending will continue to grow more rapidly in the projection period than in the managed care period (1993–1997) because of efforts by employers

and insurers to share costs with employees. At the same time, the growth rate of total health spending is expected to be higher than that of out-of-pocket spending. Hence, the out-of-pocket share of total health expenditures is projected to fall 1.2 percentage points, from 14.1 percent in 2002 to 12.9 percent in 2012. By way of comparison, this share fell 4.2 percentage points between 1991 and 2001 and 4.0 percentage points between 1980 and 1990.

■ **Public-sector spending.** Public health care spending growth accelerated sharply in 2001, increasing 9.4 percent compared with 7.5 percent in 2000 (Exhibit 6). This growth was primarily attributable to large Medicaid enrollment growth and increased Medicare payments to providers, reflecting provisions introduced under the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act (BBRA) of 1999 and the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act (BIPA) of 2000. Based on current law,

EXHIBIT 6
National Health Expenditures (NHE), By Source Of Funds, Amounts, And Average Annual Growth, Selected Calendar Years

Source of funds	1988	1993	2000	2001	2002[a]	2003[a]	2008[a]	2012[a]
NHE (billions)	$558.1	$888.1	$1,310.0	$1,424.5	$1,547.6	$1,660.5	$2,354.6	$3,079.8
Private funds	331.7	497.7	718.7	777.9	848.7	918.3	1,298.5	1,669.5
Consumer payments	293.8	445.0	643.7	701.6	769.0	834.7	1,187.6	1,534.3
Out-of-pocket payments	118.9	146.9	194.7	205.5	218.0	231.3	315.0	396.3
Private health insurance	174.9	298.1	449.0	496.1	551.0	603.4	872.6	1,138.0
Other private funds	37.9	52.7	75.0	76.3	79.7	83.6	110.8	135.2
Public funds	226.4	390.4	591.3	646.7	698.9	742.2	1,056.1	1,410.3
Federal	154.1	274.4	415.1	454.8	489.3	516.8	726.8	966.3
Medicare	89.0	148.3	224.4	241.9	254.4	262.0	353.2	464.6
Medicaid[b]	31.0	76.8	118.4	130.8	146.1	160.1	244.1	338.7
Other federal[c]	34.1	49.3	72.4	82.1	88.8	94.7	129.5	163.0
State and local	72.3	116.0	176.2	191.8	209.7	225.4	329.3	444.0
Medicaid[b]	24.1	44.8	85.0	94.7	106.7	116.8	179.1	249.4
Other state and local[c]	48.2	71.1	91.1	97.1	103.0	108.7	150.2	194.6

Average annual growth	1971–1988	1989–1993	1994–2000	2001	2002[a]	2003[a]	2004–2008[a]	2009–2012[a]
NHE	12.0%	9.7%	5.7%	8.7%	8.6%	7.3%	7.2%	6.9%
Private funds	11.7	8.5	5.4	8.2	9.1	8.2	7.2	6.5
Consumer payments	11.6	8.7	5.4	9.0	9.6	8.5	7.3	6.6
Out-of-pocket payments	9.0	4.3	4.1	5.6	6.1	6.1	6.4	5.9
Private health insurance	14.4	11.3	6.0	10.5	11.1	9.5	7.7	6.9
Other private funds	12.1	6.8	5.2	1.7	4.5	4.9	5.8	5.1
Public funds	12.4	11.5	6.1	9.4	8.1	6.2	7.3	7.5
Federal	12.8	12.2	6.1	9.6	7.6	5.6	7.1	7.4
Medicare	14.6	10.8	6.1	7.8	5.2	3.0	6.2	7.1
Medicaid[b]	14.2	19.9	6.4	10.5	11.7	9.6	8.8	8.5
Other federal[c]	9.1	7.7	5.6	13.5	8.0	6.6	6.5	5.9
State and local	11.6	9.9	6.2	8.9	9.3	7.5	7.9	7.8
Medicaid[b]	13.5	13.3	9.6	11.4	12.6	9.5	8.9	8.6
Other state and local[c]	10.8	8.1	3.6	6.6	6.1	5.5	6.7	6.7

SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.

NOTES: Numbers may not add to totals because of rounding. 1988 marks the peak period of growth in NHE, and 1993 marks the beginning of the shift to managed care.

[a] Projected.

[b] Includes Medicaid and State Children's Health Insurance Program (SCHIP) expansion (Title XIX).

[c] Includes Medicaid and SCHIP expansion (Title XXI).

we project that Medicare spending growth will slow in 2002 (5.2 percent) and 2003 (3.0 percent) because of the expiration of many of the provisions of the BBRA and BIPA, and reduced reimbursement per service for physicians under the sustainable growth rate (SGR) system. Because of this system and its cumulative nature, physician reimbursement per service is projected to decrease from 2002 to 2006. This pattern of physician spending differs from last year's projection; the change comes primarily from BEA revisions to the historical GDP, revisions to projected economic data, and updates to the Medicare data that track physician spending. The negative physician updates have attracted the attention of Congress, but as yet no legislation has been passed to alter the outlook. In the later part of the forecast, Medicare is projected to return to higher levels of growth, reaching 7.4 percent in 2012.

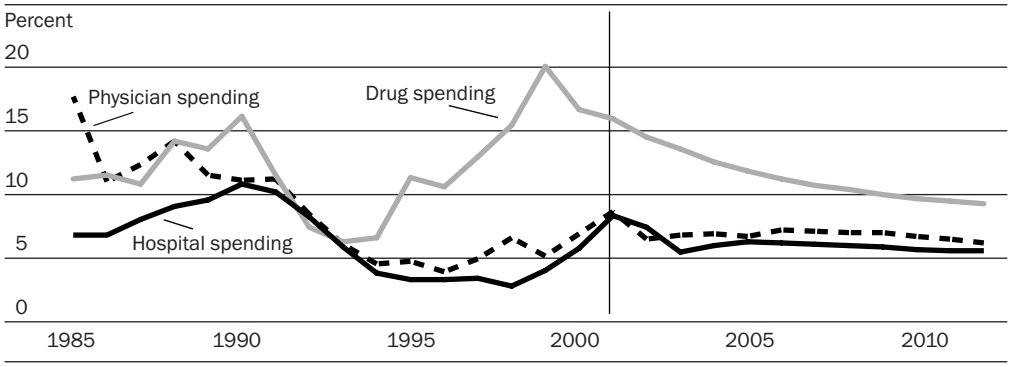
Medicaid spending also accelerated in 2001, growing at 10.8 percent. We project that this acceleration will continue into 2002, to 12.1 percent. High Medicaid spending growth is largely attributable to an 8.5 percent increase in enrollment in 2001 and a 5.8 percent increase in 2002 caused by the slowdown in economic growth. After 2002, Medicaid spending growth is expected to remain strong but to slow to 8.5 percent by 2012.

The Outlook For Health Services Spending

Recent historical trends in the major sectors are expected to continue in the near-term projection period. Our projections for 2002 suggest that hospital spending growth, driven by higher hospital labor costs and increased hospital leverage in pricing, will remain the most important driver of health spending growth. Hospital spending accounts for 27.1 percent of the projected increase in health spending in 2002, while prescription drug spending and physician spending account for 16.3 percent and 16.5 percent, respectively. Spending on drugs, the fastest-growing sector, is expected to continue its recent deceleration, in part because of the increasingly broad use of tiered copayments and fewer new drug introductions. For physicians, current-law Medicare payment updates under the SGR system are projected to slow total physician spending growth.

■ **Hospitals.** Hospital spending growth accelerated sharply in 2001, to 8.3 percent (from 5.8 percent growth in 2000), and is projected to slow slightly to 7.4 percent in 2002 (Exhibit 7). The near-term pattern of growth is largely attributable to Medicare hospital spending, which grew 7.2 percent in 2001 but is projected to decelerate to 5.7 percent in 2002 and 2.9 percent in 2003. The dominant influ-

EXHIBIT 7
Percentage Change In Spending For Hospital Care, Prescription Drugs, And Physician Services, 1985–2012



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTE: Vertical line denotes beginning of projections; trend lines to the left of the vertical line represent historical data.

ence on this pattern of growth has been the effects of the Balanced Budget Act (BBA) of 1997 and subsequent legislation (the BBRA and BIPA) that softened its impact. Key changes projected for hospitals in 2002 and 2003 are concentrated in hospital-based home health and skilled nursing facilities (SNFs). In contrast, acceleration in Medicaid hospital spending largely reflects current and projected rapid growth in enrollment propelled by rising unemployment. After increasing 10.2 percent in 2001, Medicaid hospital spending is projected to grow 11.9 percent in 2002.

Private spending growth for hospital services has been accelerating consistently since its trough of –1.0 percent in 1994. Growth was 7.8 percent in 2001, and similar rates of growth are expected in both 2002 and 2003. The recent acceleration in hospital spending per enrollee by private health insurance has been quite rapid (with growth increasing from 6.3 percent in 2000 to 9.9 in 2001) and reflects the consolidation of hospitals in many local markets and a trend toward less restrictive networks of providers. Per enrollee hospital spending growth is projected to ease to 8.2 percent in 2002 and 8.0 percent in 2003.

The recent acceleration has been particularly rapid for inpatient hospital spending, narrowing the difference between inpatient and outpatient spending growth. Community hospital outpatient spending grew 7.2 percentage points faster than inpatient spending in 1995, but just 3.1 percentage points faster in 2000.[21] We project a continued convergence of inpatient and outpatient spending growth rates, so that by 2012 outpatient spending grows just 1.1 percentage points faster than inpatient spending.

We project private hospital spending growth to slow from 7.7 percent in 2003 to 5.0 percent in 2012, reflecting a growing acceptance of more restrictive forms of coverage. In our model, the restrictiveness of managed care is represented by the share of the privately insured population enrolled in health maintenance organizations (HMOs), which is used as a proxy for the effects of all mechanisms of managing care.[22] Recent research continues to confirm HMOs' cost-restraining influence on hospital use and spending growth.[23] The decline in HMO enrollment between 1999 and 2001, and the associated shift toward looser forms of managed care, is believed to have played a role in accelerating utilization per capita and hospital price inflation for this period. In the long run, we project that a slowing economy will resurrect pressures—captured in part by the HMO proxy—to restrain hospital spending growth.

"In the long run, we project that a slowing economy will resurrect pressures to restrain hospital spending growth."

■ **Prescription drugs.** Similar to last year, our drug spending projections show a continued deceleration in the rate of growth, moving from 15.7 percent for 2001 to 14.3 percent in 2002 and reaching 9.2 percent by 2012. The turning point for prescription drug spending growth came in 1999, preceding the projected peak for total national health spending growth by two years. The deceleration in growth has been caused primarily by the introduction of tiered-payment schemes and fewer recent "blockbuster" drug introductions, and it is expected to continue as a result of the expansion of these schemes and the introduction of other forms of cost sharing.

We project that drug spending growth will increase at an average annual rate of 11.1 percent between 2002 and 2012, which exceeds total health spending by 3.8 percentage points per year, on average. By 2012 we project that prescription drug expenditures will account for 14.5 percent of total health expenditures; in 2001 the share was 9.9 percent.

The projected growth path of drug spending is influenced by a number of factors, including real disposable personal income, drug prices relative to overall consumer prices, direct-to-consumer (DTC) advertising, and new drug introductions.[24] The impact of higher drug prices will be the strongest be-

tween 2002 and 2004, when drug price growth is projected to be 3.2 percentage points per year greater, on average, than overall consumer prices. For 2005 through 2012 we project the difference between drug and overall price growth to average 1.6 percentage points per year. Spending for DTC advertising grew at an average annual rate of 44.9 percent from 1995 through 2000.[25] However, in 2001 it grew at only 9.4 percent and is expected to decelerate throughout the projection period. New drug introductions are expected to grow steadily but at a slower rate than we anticipated last year, as Food and Drug Administration (FDA) approval times have increased and the number of new drug applications has fallen below expectations.[26]

There are a number of important factors affecting these prescription drug projections. Studies have shown that use of prescription drugs has been rising recently because of an increased number of people affected by chronic conditions and because of doctors' prescribing more drugs per office visit.[27] The result is that use is increasing for all age groups. In addition, the expansion of state prescription drug programs could further increase public spending for prescription drugs. However, patents for several blockbuster drugs are scheduled to expire during the projection period. If the majority of the users of these drugs switch to the less expensive generic alternative, spending in those therapeutic classes may fall. Also, three-tier drug plans have shifted more costs to consumers and encouraged the use of generic drugs and brand-name drugs on the formulary. Since insurance companies succeeded in slowing use after implementing these plans, some may try other forms of cost sharing, such as substantially raising the copayment for brand-name drugs (the third tier) or creating four- or five-tier drug plans. While many of the factors likely to influence prescription drug spending over the next decade work in opposite directions, our projections implicitly attempt to take these forces into account.

■ **Physician and clinical services.** Historically, spending for physician and clinical services has grown at a rate roughly similar to that of total health spending, and the same pattern is expected to occur during the forecast period. The average annual growth between 2002 and 2012 is projected to be 6.8 percent for physician services, relative to the corresponding 7.3 percent growth for total health spending.

For 2002 through 2005 this year's forecast of the growth in physician spending is much slower than last year's was. Medicare physician spending growth is low in the beginning of the forecast period because of the SGR system, which ties physician spending to economic growth. Slower private physician spending for the near term is mainly the result of slower disposable personal income growth in the recent historical period. For 2005 through 2012 we project physician spending growth to accelerate faster in this year's projections than in last year's, primarily because of higher projected disposable personal income growth. The continued shift of care to other professional services, negative updates to the Medicare physician payment rates, and faster growth in other sectors such as prescription drugs are all expected to contribute to the slow continued decline in physician spending as a share of total health care spending.

Quite a bit of uncertainty exists surrounding the factors that might influence physician spending. It is unclear how the trends in prescription drug spending will affect the number of physician office visits. The implementation of consumer-driven health care tools (such as tiered plans, concierge service, information access and delivery tools available through the Web, and portable and self-administered medical devices) that are aimed at providing better-value, more efficient health care may have strong influences on physician spending. In the past, changes in how health care services are distributed typically emanated from pressure being applied by third-party payers, such as managed care organizations and government. The need to constrain and reduce health care costs often motivated their efforts. It is not clear whether consumers, with an increased role in the distribution of health care

services, will have the same motivation and impact.[28]

BOTH THE RECENTLY RELEASED historical health spending estimates and this set of projections have highlighted the enormous pressures mounting on our health care system. Private health insurance premiums are rising at rapid rates, federal and state budget shortfalls exist, a softer labor market has reduced the number of people with private insurance and has increased Medicaid enrollment, and provider costs are continuing to rise. These trends have the unique, although not unparalleled, impact of affecting all of the relevant parties—from payers to providers to employers to consumers—at the same time.

Experience indicates that changes in the mechanisms of payment and delivery of care, as well as consumers' preferences and public sentiment, will result in a slowdown in growth, temporarily alleviating some of these pressures. However, experience also indicates that society is likely to be willing to allocate more of each dollar of income to health care. We project both of these outcomes over the next decade: national health spending growth slowing from 8.7 percent in 2001 to 6.7 percent in 2012, and the share of GDP accounted for by health care increasing from 14.1 percent in 2001 to 17.7 percent in 2012. The intriguing part of the next decade may be where it leaves us, since the baby-boom generation will begin to become eligible for Medicare at the end of the projection period, and an unparalleled set of pressures on the system is likely to develop.

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NOTES

1. K. Levit et al., "Trends in U.S. Health Care Spending, 2001," *Health Affairs* (Jan/Feb 2003): 154–164.
2. S. Heffler et al., "Health Spending Projections for 2001–2011: The Latest Outlook," *Health Affairs* (Mar/Apr 2002): 207–218.
3. In this context, "utilization" refers to volume of services, service mix and intensity, population, demographics, and measurement error.
4. The underwriting cycle refers to the "cyclical pattern of 'underwriting profits,' defined as profitability exclusive of investment income." J. Gabel et al., "Tracing the Cycle of Health Insurance," *Health Affairs* (Winter 1991): 48–61.
5. The net cost of insurance includes administrative costs, change in reserves, rate credits and dividends, premium taxes, and profits or losses.
6. J. Gabel et al., "Job-Based Health Benefits in 2002: Some Important Trends," *Health Affairs* (Sep/Oct 2002): 143–151.
7. A projection for disposable personal income consistent with the economic assumptions from the 2002 Medicare Trustees Report is generated using the University of Maryland Long Term Inter-Industry Forecasting Tool (LIFT). For this period (2004–2012), real GDP growth is projected to be, on average, 0.5 percentage points per year above last year's projection, while real disposable personal income growth is projected to be higher by 0.9 percentage points per year.
8. The impact of demographic changes during our projection period is not a major driver of overall health care spending growth. There is, however, a mixed effect on private and public spending. Private health insurance enrollees are getting older, while Medicare beneficiaries are getting younger.
9. In 2001 the GDP growth rate was 0.3 percent, not the 1.0 percent that we projected last year. The difference is mostly accounted for by substantial revisions to the quarterly GDP figures from the Bureau of Economic Analysis, "National Income and Product Accounts," 31 July 2002, www.bea.gov/bea/newsrel/gdp202a.pdf (6 January 2003).
10. Boards of Trustees, *2002 Annual Report of the Boards of Trustees of the Federal Hospital Insurance Trust and Federal Supplementary Medical Insurance Trust Funds*, 26 March 2002, cms.hhs.gov/publications/trusteesreport/2002/tr.pdf (6 January 2003).
11. The results of our aggregate model of overall private personal health care spending are reconciled with separate models for private spending in each sector. For a more complete description of our projections model, see Centers for Medicare

and Medicaid Services, "Projections of National Health Expenditures: Methodology and Model Specification," 17 July 2002, cms.hhs.gov/statistics/nhe/projections-methodology (6 January 2003).

12. We use currently available historical data (as of November 2002) and updated near-term forecasts to transition to the 2002 Medicare Trustees Report assumptions.
13. U.S. Bureau of Labor Statistics, "The Employment Situation: November 2002," 1 November 2002, www.bls.gov/news.release/archives/empsit_12062002.pdf (6 January 2003).
14. BLS, "Producer Price Indexes: November 2002," 15 November 2002, www.bls.gov/news.release/archives/ppi_12132002.pdf (6 January 2003).
15. L.A. McCormack et al., "Trends in Retiree Health Benefits," *Health Affairs* (Nov/Dec 2002): 169–176.
16. J. Gabel, "Erosion of Private Health Insurance Coverage for Retirees," April 2002, www.cmwf.org/programs/medfutur/gabel_retiree_cb_506.pdf (6 January 2003).
17. The insured population is benchmarked to the 1997 Health Interview Survey, as reported in Centers for Disease Control and Prevention, *Summary Health Statistics for the U.S. Population: National Health Interview Survey, 1998,* October 2002, www.cdc.gov/nchs/data/series/sr_10/sr10_207.pdf (6 January 2003), and escalated using the change in the insured population from the Census Bureau, as reported in U.S. Census Bureau, *Health Insurance Coverage, 2001,* September 2002, www.census.gov/prod/2002pubs/p60-220.pdf (6 January 2003).
18. The shift to Medicare does not imply a one-to-one reduction in private health insurance enrollment, since a large portion of Medicare enrollees carry supplemental coverage.
19. Gabel et al., "Tracing the Cycle of Health Insurance."
20. M. Freudenheim, "The Healthier Side of Health Care," *New York Times,* 23 October 2002; and Henry J. Kaiser Family Foundation, *Trends and Indicators in the Changing Health Care Marketplace, 2002—Chartbook* (Menlo Park, Calif.: Kaiser Family Foundation, 2002).
21. American Hospital Association, "U.S. Registered Community Hospitals," in *Hospital Statistics* (Chicago: AHA, various years). Total hospital spending was derived from the National Health Accounts; the split between inpatient and outpatient spending was obtained from the AHA Annual Survey of Hospitals.
22. We recognize that this proxy (the only comparable series for which a consistent history is available) may not capture all of the managed care effects, as rates of growth in HMO enrollment diverge from those of preferred provider organizations (PPOs), and as the characteristics of forms of HMOs and PPOs have tended to change and converge over time. For this reason, we have attempted to adjust our projections to reflect these trends based on supplemental data and research.
23. R.H. Miller and H.S. Luft, "HMO Plan Performance Update: An Analysis of the Literature, 1997–2001," *Health Affairs* (July/Aug 2002): 63–86.
24. For a more complete description of our drug model, see CMS, "Types of Service," 17 July 2002, cms.hhs.gov/statistics/nhe/projections-methodology/default-03.asp (6 January 2003).
25. National Institute for Health Care Management, *Prescription Drugs and Mass Media Advertising, 2000,* November 2001, www.nihcm.org/DTCbrief2001.pdf (6 January 2003).
26. M. Kaufman, "Decline in New Drugs Raises Concerns," *Washington Post*, 18 November 2002.
27. NIHCM, *Prescription Drug Expenditures in 2001: Another Year of Escalating Costs,* 6 May 2002, www.nihcm.org/spending2001.pdf (6 January 2003). Chronic conditions have affected utilization in two ways: more people are being diagnosed with these conditions, and the thresholds for treatment of these conditions have been lowered.
28. D.R. Masys, "Effects of Current and Future Information Technologies on the Health Care Workforce," *Health Affairs* (Sep/Oct 2002): 33–41; Employee Benefit Research Institute, *Consumer-Driven Health Benefits: A Continuing Evolution?* (Washington: EBRI, 2002); and S. Stevens, "Docs-on-the-Net Consults Offer Second Opinions," *Physician's Financial News* 20, no. 3 (2002): 10–11.